THE OCCURRENCE OF THE JUNIPER SHIELDBUG *ELASMOSTETHUS TRISTRIATUS* (FABR.) (HET.: ACANTHOSOMATIDAE), IN NORTHUMBERLAND AND CO. DURHAM

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ACCORDING TO Southwood and Leston (1959) "The Juniper Shieldbug is found in juniper woods where these are of a lowland or downland form. Thus the upland patches of juniper in Yorkshire and the north do not usually support it, and a Northumberland record requires confirmation: The sole authentic capture in the north was made in Witherslack Wood, Lancs. [now Cumbria] in February 1935".

Ward (1977) shows a distribution map of this species and the accompanying notes state, "A southern species". The Witherslack record is mentioned, and the text continues, "there are two possible records for Durham. Heslop-Harrison (1955)".

The only local list of Hemiptera, Bold (1872) does not record this species. However, Massee (1945) does indicate a record of this insect's occurrence in Northumberland. The origin of this record can be traced to Saunders (1892) where this species was noted to have been recorded by "Wailes, Newcastle". George Wailes (1802-1882) was a contemporary of T. J. Bold (1816-1874); both were notable members of the local natural history society and very competent entomologists. Bold frequently quoted records made by Wailes in other papers. It would appear that Wailes made the "Newcastle" record sometime between 1872 and 1882. As Newcastle-upon-Tyne is situated on the southern edge of what was then Northumberland, this record could, in fact, relate to either county. The nearest stands of juniper to Newcastle-upon-Tyne are in Co. Durham and this record is probably from the latter county. This likelihood is enhanced by the fact that Wailes lived in Co. Durham.

The next note of this species occurrence locally, is that of Prof. J. W. H. Harrison (1955), who records finding it on 21 September 1955, near East Butsfield, (OS grid reference NZ 1145) and later, on 24 September in the same year, near Wolsingham, (NZ 0737). Both sites are in Co. Durham. However, an examination of the juniper distribution in Co. Durham, (see Graham, 1988), does not indicate any records of this plant for the ten-kilometre grid square NZ 14. There is, however, considerable doubt, at local and national level, concerning the validity of many of the botanical and entomological records made by J. W. H. Harrison (Sabbagh, 1999). I have in my possession Harrison's Hemiptera collection. None of the specimens in it are labelled as being taken by him. The few insects that do have data labels were taken by well-known hemipterists such as A. M. Massee and others, but most insects would appear to have been purchased, or otherwise obtained, by Harrison as a reference collection.

In March 2000, I was asked by The Northumberland National Park Authority to carry out a survey of the invertebrates on Juniper at three sites within the Park. All three areas are considered as "upland" although, apparently, there is no definition to separate the lowlands from uplands (D. A. Sheppard, pers. com.) Monthly visits were made to each site.

On 15 June, at Hepple Whitefield Farm (VC 67, grid reference NY 9898), seven specimens of the Juniper Shieldbug were beaten from female juniper bushes, bearing numerous ripe berries. All were mature over-wintered adult insects. This is the first confirmed record of this species in Northumberland.

Having been successful in finding this insect in Northumberland, I then determined to try and locate it in Co. Durham (VC 66). On 18 June, I visited the Hisehope Burn SSSI, (NZ 0447). Three specimens were found before rain terminated further work. Again all were mature adults.

On 5 August, I visited Ilderton Dod Alders and Threestoneburn Alders (both NU 9920), in the Cheviot Hills in North Northumberland (VC 68). Fifteen specimens of Juniper Shieldbug in total were beaten from these sites, which are within a designated Site of Nature Conservation Importance (SNCI). Once again all the specimens were mature, rather than teneral, forms.

On 8 August, at The Bog Farm SSSI, in the south-west of Northumberland (in VC 67 at NY 6854), six mature specimens were beaten from berry-bearing juniper. Several half-grown nymphs were also found. Three adult specimens were retained. When these were examined upon reaching home one pair was *in copula*. Bearing in mind the late date of this mating, is it possible that this species is double brooded (although behaviour in the artificial situation within the specimen pot does not necessarily reflect the natural situation). In view of the cool climatic conditions prevailing in the northern uplands and the altitude of the sites, between 180 and 280 metres above sea level (588 to 916 feet), this seems very unlikely. At present, no local data are available as to the time of the adult's emergence from hibernation. Southwood & Leston (1959) give late March for southern downland specimens, but it is likely to be much later in the year on these cold and windswept northern upland sites.

On 11 August four specimens were beaten from juniper at Oakeydene (NY 821559) in south Northumberland, V.C.67. Again, all these specimens appeared to be over-wintered adults. A further four specimens were taken from juniper on National Trust landholding on 20 August at Park Burn (NY 698612) in VC 67.

A visit to the Rowley Burn near Hexham, Northumberland at NY 9056, on 22 August produced only a single nymph. There were only two female juniper bushes on the site with several males spread out along the edge of a steep birch covered ravine.

Dr B. S. Nau (The National Hemiptera Recorder) informed me that, in recent years, *Elasmostethus tristriatus* has increased its range in southern England by utilising Lawson's Cypress *Chamaecyparis lawsoniana* as an alternative foodplant. This conifer is not at all common in towns and villages

in either Northumberland or Durham. It is none-existent in the very isolated upland areas where juniper is found. It would, therefore, appear that the Juniper Shieldbug could be an indigenous species in northern England and, possibly, has been present undetected in these counties for centuries. The lack of records for this species is almost certainly due to the fact that there have been very few local entomologists interested in Hemiptera, and that most of the stands of juniper are not at all easily accessed.

At present, no attempt has been made to assess numbers of this shieldbug on the sites where it has been located; the aim has been simply to detect it, and to obtain records from the three vice-counties. Further work on the local distribution of this insect will be carried out as time permits. From the records obtained so far this year, it appears that this insect has a wide distribution locally. There are at least 83 known sites where juniper can be found within Northumberland & Co. Durham (Clifton et al., 1995; 1997), varying from sites with single isolated plants to those with colonies of over 400 bushes.

Now that the occurrence of this species is proven in north-east England, it would be well worth while for those who have an interest in Hemiptera, to examine stands of juniper in Yorkshire, Cumbria and counties further south where this insect has not been recorded, to ascertain whether it is present. Examining juniper stands in areas where it is known to exist may also reward entomologists north of the Scottish Border. Where it occurs in Cumbria and in Scotland, the *Juniper communis* ssp. *nana*, should also be examined.

In Northumberland and Co. Durham, juniper grows in three forms according to its exposure to the elements. These are prostrate, semi-erect and columnar. Female, berry-bearing plants of all three growth forms often occur on the same site and all have produced specimens of this shieldbug. No specimens have been beaten from male bushes.

When seeking this insect, care should be taken when examining the contents of the beating tray. If this insect lands on its back, it can remain immobile for some considerable time. The colour of the underside of the insect exactly matches the colour of unripe juniper berries which may also be in the tray. From my somewhat limited experience of finding this species, I would suggest that anyone seeking this species should concentrate on examining only the female berry-bearing bushes and to pay specific attention to branches receiving long hours of exposure to sunlight, especially those on the edges of juniper stands. These seem to be the most productive places.

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A note on *Oedemera lurida* (Marsham) (Col.: Oedemeridae) in North London (Middlesex)

Further to the discussion of *Oedemera lurida* by Laurence Clemons (*Ent. Rec.* **111**: 141-143) and Roger Morris (*Ent. Rec.* **112**: 265), I can comment upon its occurrence on Coppett's Wood which abuts my garden. Here the species has been noted as widespread on scrubland and grassland June-August (1985, *Coppett's Wood and Environs as a Local Nature Reserve, Wildlife Survey and Management Proposals,* London Wildlife Trust: 57). Formerly, the eastern area of the woodland had been the site of a sewage works which closed in 1963 and for the following two years was used as a rubbish tip and dumped to a depth of approximately 20 feet; also overspills of sewage have occurred into the wood and various developments have occurred around the boundaries of the site. Thus the area would fit Mr Morris's association of *O. lurida* with "ruderal habitats such as waste ground and roadside verges". Mr Morris notes its occurrence on ox-eye daisy *Leucanthemum vulgare* L., to which I can add spear thistle *Cirsium vulgare* (Savi) and bindweed *Convolvulus arvensis* L. Oedemeridae are pollen feeders. I have not seen *Oedemera nobilis* (Scopoli) in the area.– K. G. V. Smith, 70 Hollickwood Avenue, London N12 0LT.